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10/758,170

01/15/2004

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EXAMINER

FLORES, LEON

ART UNIT

PAPER NUMBER

2611

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/758,170

Applicant(s)

SASAKI ET AL.

Examiner

Leon Flores

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/2/2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims (1-8) are rejected under 35 U.S.C. 103(a) as being unpatentable over Todd (US Patent 6,118,773) in view of Tomiyoshi et al (hereinafter Tomiyoshi) (US Patent 6,628,733 B1).**

Re claim 1, a first antenna for receiving signals from base stations (See fig. 1: 25); a second antenna for receiving signals from base stations (See fig. 1: 20); a

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received field strength measuring unit for measuring a received field strength indicating a field strength of an intermittent signal received at one of said first and second antennas, wherein said intermittent signal is sent from any one of the base stations every designated slot cycle in standby mode (See col. 5, lines 3-13 "idle is equivalent to standby mode"); an information storage unit for storing information regarding said received field strength at said first and second antennas (See col. 4, lines 19-26); and an antenna selection unit for selecting one of the first and second antennas at a higher received field strength based on reception environment information stored in said information storage unit immediately prior to start of a phone conversation when a transition is made from standby mode to the phone conversation. (See fig. 3 & col. 5, line 63 – col. 6, line 21 & col. 5, line 1-13. Furthermore, the selection of the antenna is made prior to the next reception frame.)

But the reference of Todd fails to specifically disclose a diversity receiver used in a CDMA communication system. However, Tomiyoshi does. (See fig. 1 & col. 1, line 32) Tomiyoshi discloses a CDMA diversity receiving device in which signals from two antennas are alternately switched by an antenna switch at a predetermined rate.

Therefore, taking the combined teachings of Todd and Tomiyoshi as a whole. It would have been obvious to one of ordinary skill in the art to have modified the system of Todd, in the manner as claimed and as taught by Tomiyoshi, for the benefit of obtaining despreading timings to perform RAKE reception.

Re claim 2, the combination of Todd and Tomiyoshi further disclose that wherein said antenna selection unit selects one of the first and second antennas alternately every said designated slot cycle in standby mode (In Todd, see fig. 3) (In Tomiyoshi, since its CDMA system is called slot cycle), and wherein said received field strength-measuring unit further stores field strength information regarding the field strength at the antenna selected by said antenna selection unit. (In Todd, see col. 4, lines 19-26)

Re claim 3, the combination of Todd and Tomiyoshi further disclose that wherein, in standby mode, said antenna selection unit adjusts ratios at which the antennas are selected according to the field strengths received at the antennas respectively (In Todd, see col. 5, lines 63-67. Furthermore, the system will select the antenna which has the best reception characteristics always.), and wherein said received field strength-measuring unit further stores field strength information regarding the field strength at the antenna selected by said antenna selection unit in said information storage unit. (In Todd, see col. 5, lines 58-62)

Re claim 4, the combination of Todd and Tomiyoshi further disclose that a base station information acquiring unit for acquiring base station information and storing the base station information, wherein said base station information is included in signals from the base stations; wherein, when said first antenna receives a signal sent from a first base station, said base station information acquiring unit acquires base station information regarding said first base station and stores the base station

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information, wherein, when said second antenna receives a signal sent from a second base station, said base station information acquiring unit acquires base station information about said second base station and stores the base station information in said information storage unit (One skilled in the art would know that in order to establish connectivity between the transmitter and a receiver the receiver must be able to able to acquire information about the base station, and these information are included in each frames the transmitter sends the receiver.), and wherein said antenna selection unit selects one of the first and second antennas at a higher received field strength based on reception environment information about each antenna and base station information stored in said information storage unit immediately prior to start of a phone conversation when a transition is made from standby mode to the phone conversation. (In Todd, see fig. 3 & col. 5, line 63 – col. 6, line 21 & col. 5, line 1-13. Furthermore, the selection of the antenna is made prior to the next reception frame.)

Claim 5 is a method claim corresponding to system claim 1. Hence, the elements in system claim 1 would have necessitated the steps performed in method claim 5. Therefore, claim 5 has been analyzed and rejected w/r to claim 1.

Claim 6 is a method claim corresponding to system claim 2. Hence, the elements in system claim 2 would have necessitated the steps performed in method claim 6. Therefore, claim 6 has been analyzed and rejected w/r to claim 2.

Claim 7 is a method claim corresponding to system claim 3. Hence, the elements in system claim 3 would have necessitated the steps performed in method claim 7. Therefore, claim 7 has been analyzed and rejected w/r to claim 3.

Claim 8 is a method claim corresponding to system claim 4. Hence, the elements in system claim 4 would have necessitated the steps performed in method claim 8. Therefore, claim 8 has been analyzed and rejected w/r to claim 4.

**Claims (1 & 5) are rejected under 35 U.S.C. 103(a) as being unpatentable over Takai et al (hereinafter Takai) (US Patent 5,561,673) in view of Seiki (US Publication 2002/0119808 A1), and further in view of Tomiyoshi et al (hereinafter Tomiyoshi) (US Patent 6,628,733 B1).**

Re claim 1, Takai discloses a first antenna for receiving signals from base stations (See fig. 11A: 51); a second antenna for receiving signals from base stations (See fig. 11A: 52); a received field strength measuring unit for measuring a received field strength indicating a field strength of an intermittent signal received at one of said first and second antennas, wherein said intermittent signal is sent from any one of the base stations every designated slot cycle in standby mode (See fig. 11A: 1103.); an information storage unit for storing information regarding said received field strength at said first and second antennas (See fig. 11A: 1104 & col. 10, lines 36-37); and an antenna selection unit for selecting one of the first and second antennas at a higher

received field strength based on reception environment information stored in said information storage unit immediately. (See fig. 12 & col. 10, lines 11-16)

But the reference of Takai fails to disclose that signals are intermittent signals, and that the antenna selection is made prior to start of a phone conversation when a transition is made from standby mode to the phone conversation.

However, Seiki does. (See paragraphs 24-27) Seiki discloses a cellular device that utilizes a non-directional antenna when operating in non-voice communication mode, and a directional antenna when operating in voice communication. During non-voice communication mode the cellular device is in a state in which it intermittently receives electromagnetic waves from the base station. On the other hand, when the device is in the voice communication mode a control unit switches from the non-directional antenna to the directional antenna to reduce the radiation of electromagnetic waves from the antenna toward the human body.

Therefore, taking the combined teachings of Takai and Seiki as a whole. It would have been obvious to one of ordinary skill in the art to have incorporated these features into the system of Takai in the manner as claimed, and as taught by Seiki, for the benefit of reducing the radiation of electromagnetic waves from the antenna toward the human body.

The combination of Takai and Seiki discloses the limitations as claimed, except they do not specifically disclose a diversity receiver used in a CDMA communication system. However, Tomiyoshi does. (See fig. 1 & col. 1, line 32) Tomiyoshi discloses a



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CDMA diversity receiving device in which signals from two antennas are alternately switched by an antenna switch at a predetermined rate.

Therefore, taking the combined teachings of Takai, Seiki, and Tomiyoshi as a whole. It would have been obvious to one of ordinary skill in the art to have modified the system of Takai, as modified by Seiki, in the manner as claimed and as taught by Tomiyoshi, for the benefit of obtaining despreading timings to perform RAKE reception.

Claim 5 is a method claim corresponding to system claim 1. Hence, the elements in system claim 1 would have necessitated the steps performed in method claim 5. Therefore, claim 5 has been analyzed and rejected w/r to claim 1.

### ***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sunaga (US Publication 2004/0132515 A1).

### ***Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Flores whose telephone number is 571-270-1201. The examiner can normally be reached on Mon-Fri 7-5pm Alternate Fridays off.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LF

March 12, 2007

  
DAVID C. PAYNE  
SUPERVISORY PATENT EXAMINER